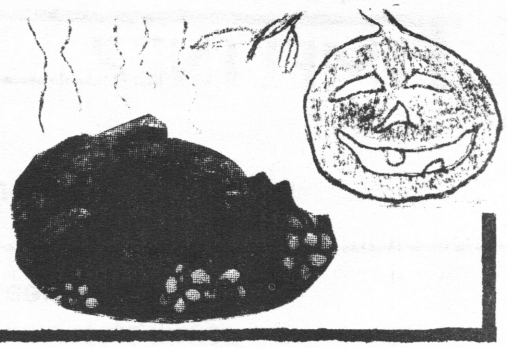
TIMELINEZ



THE JOINT NEWSLETTER OF THE THREE TIMEX-SINCLAIR USER GROUPS IN THE SAN FRANCISCO BAY AREA
** EBZUG PUG SVSTUG **

Volume 5, Issue 10/11 October / November 1987 Serving TIMEX/sinclair, and QL

NEW News....

First off, I would like to reflect on our past issues of Timelinez. Especially on pages 291 thru 322. I am sure everyone is aware that these issues were compiled by Norm Lehfeldt. Glancing back, I noticed that Norm managed to upgrade the quality of Timelinez considerably by indroducing us to RLE and GIF graphics, 3-D images, and Desk-Top Publishing as a few. I personally want to thank Norm for his excellence, proficiency, professionalism and seriousness in doing a job well done. Norm, Thankyou!

Secondly, I quess the best way to indroduce your new editor is to tell you a little of his history. I have been a TIMEX/sinclair user since the days of the ZX-81, back in 1981. Since then, I grew up to a 2068 and sold my ZX-81 for a T/S 1500. I lived in the Tampa Bay area located in the state of Florida and was very active with TAS BAM (Tampa And Suncoast Bay Area Microcomputer). Joining the Air Force brought my wife and I here in Sunnyvale, CA which is where we now live. My last computer purchase was a Sinclair QL system including a QL monitor and QL printer.

Stating all this brings to mind one topic: Text Files. I would like to say that I can handle any text file you can think of when submitting articles, but unfortunately I can't. It seems that our new pet, my wifes latest venture - a rabbit, hopped behind my desk and has eaten most or the cables to the 2068. My only working systems are the 1500 and QL. So, please send files either in text form (2040 printout prefered), or on Quill, thankyou.

Editor's Last Note:
HAPPY HALLOWEEN....
HAPPY THANKSGIVING....

INSIDE THIS ISSUE:

An Electronic Spreadsheet:
Function And Application
By Albert F. Rodriguez

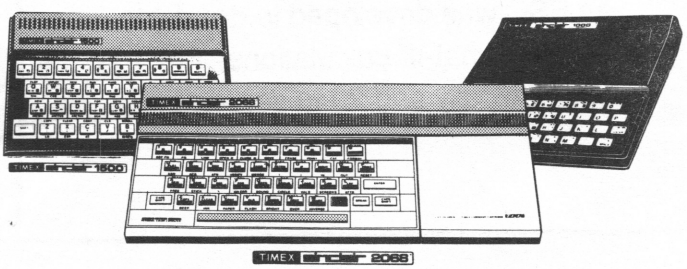
CLUSTER - QL program written
By Mark Wahl

CLUB NEWS - Newsletter Exchange

BOUNCING LINES....

Here is a small 2068 program that I dug out or my mess of miscellaneous stuff. Just type it in and enter 'RUN'.

```
  1 GO TO 200
 60 FOR Z=1 TO 200
 62 PLOT A,B: DRAW X-A,Y-B
 70 LET A=A+A1: LET B=B+B1
 80 LET X=X+X1: LET Y=Y+Y1
100 IF A>=255 OR A<=0 THEN LET
A1=-A1: LET A=A+A1
110 IF X>=255 OR X<=0 THEN LET
X1=-X1: LET X=X+X1
120 IF B>=175 OR B<=0 THEN LET
B1=-B1: LET B=B+B1
130 IF Y>=175 OR Y<=0 THEN LET
Y1=-Y1: LET Y=Y+Y1
135 NEXT Z
136 CLS
140 GO TO 60
199 REM ART
200 PAPER 7: INK 1: CLS
210 LET A=INT (RND*255): LET B=
INT (RND*175)
220 LET X=INT (RND*255): LET Y=
INT (RND*175)
230 LET A1=2: LET B1=2: LET X1=
4: LET Y1=4
240 GO TO 60
```



"An Electronic Spreadsheet: Function And Application"

-- An electronic spreadsheet is to the pencil, eraser, and slide rule what a jet plane is to the covered wagon. Cover the continent in a few hours (without error) not a few years with a lot of backtracking - -

Paul Shelley
SPREADSHEETS PART II
Vol. 2:11
"T.S. User Newsletter"

PREFACE

Some people may seem undismayed by the aforementioned statement, considering that they have prior knowledge of what is an "Electronic Spreadsheet Calculator" (ESC) and that they know how to use it.

However, for the rest of the people who can't or don't yet appreciate the significant meaning conveyed by this colloquial expression, it is for them that this presentation is primarily intended.

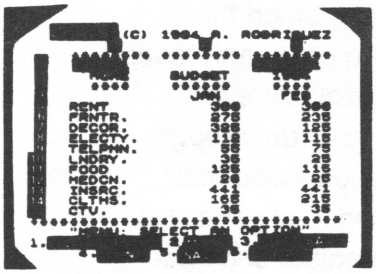
My purpose herein will be to demonstrate that for the Timex/Sinclair family of computers there are ESCs capable of doing the two main things that an ESC was developed to do: 1.) to handle "what-if" calculations electronically and 2.) to serve as a general framework with which to build "models" for the purpose of continually summarising, reporting, and analyzing, in matrix form, any financial, accounting, mathematical, engineering, and scientific manipulation of numerical data. And that the ESCs available for the T/S can be acquired for a fraction of the cost (and still carry as much "punch") as do the more sophisticated ESC versions for the higher priced computers.

I will use an ESC that is for sale by my own company to illustrate the preceding facts to the experienced as well as the inexperienced user in the audience. Literature about this ESC is readily available. Though, it is hoped that the distribution of such literature will only be deemed academic in semblance compared to the illustration of this ESC as our main example throughout this presentation.

PART I

In our first step toward demystifying what is an ESC and what its applications are I would like to begin by showing you what my ESC looks like from the start (See Fig. 1)

EDITOR'S NOTE: Mr. Rodriguez will be giving this lecture at the 1988 Florida Spring TIMEX/sinclair Fest. This is a two part series article featuring an electronic spreadsheet for the TIMEX/sinclair line of computers.



(fig. 1)

As you can see it is basically a grid composed of columns (A-O) and rows (1-30); where each intersection (column/row) meets it is a place for holding some sort of data (e a label, value, or formul nd these data comp: ients are referred to as "cells'

The concept of an ESC is fairly new. The first ESC was introduced in 1978 by a student at The Harvard Business School by the name of Dan Bricklin. Mr. Bricklin's idea was that a spreadsheet provided a "better way to perform endless recalculations of balance sheets, income statements, and forecasts required whenever a single assumption changed." Reportedly, he modeled his first microcomputer-based spreadsheet program to "an electronic black-board and electronic chalk." His original work had 5 columns and 20 rows. Later on Mr. Bricklin teamed up with Robert Frankston who enhanced this first ESC by increasing the number of cells and developed some "user-friendly" features and packed the results into a 20K program for the Apple microcomputer. To make a long story short, this original invention was later named VISICALC and it is no secret that this software package went to become one of the most successful selling programs in the years prior to another popular integrated software tool called Lotus 1-2-3.

My company's ESC for the T/S is called ZX-CALX (or T/S CALC 2000 for the T/S 2068). It was primarily designed after the VISICALC program. Not exactly as VISICALC, but similar in function, it can handle just about any procedure than the higher priced version.

My first task is to demonstrate how my program handles "what-if", contingency calculations like the higher priced ESCs do. It is primarily with "what-if" calculations that a spreadsheet proves its most salient advantage and versatility versus the vertical-statically-fixed formatted programs which offer a limited method for storing, displaying and manipulating numerical data. Also ZX-CALC has the ability to use its resources for producing any number of various display "models" that the latter programs do not have.

"What -if" calculations can be understood to occur in two set of

FOOD FOR THOUGHT: Consideration for others can mean taking a wing instead of a drumstick.

A child on a farm sees a plane fly overhead and dreams of a faraway place. A traveler on the plane sees the farmhouse...and dreams of home.

circumstances. First a cell may contain data in the form of a formula such as: A01+B01 assigned to C01. By this I mean that the cell C01 contains the formula A01+B01 continually, until the formula is changed or deleted from the program and that when you use the automatic-calculate option of the ESC the result of said formula will always appear in cell C01 and that the result will only vary if the values in cells A01 and B01 should happen to change. Second, the program may assign the formula A01+B01 to cell C01, but do so by entering this formula in the form of an equation each time the final result has to appear. That is, in the first case the formula is calculated but it is also hidden and saved for later use by the program; whereas, in the second case no formula is hidden and saved by the program but it is allowed to be used and reused by manually entering it everytime the result is to appear in the designated cell (which in this case is cell C01). What is important to note from either "what-if" method of calculation is that the final result of a calculation can be changed by simply recalculating the result-cell with the program as the data varies within the given formula. This ability to handle recalculations is what makes ESCs so unique in handling and displaying numerical data. Without this capacity to do recalculations there would be no other method than "backtracking" and using an eraser to change the intermediate and final results and later run through the entire calculation mode that was originally used to arrive again at the new intermediate and final total results of a given matrix of numbers.

With respect to ZX-CALC it is the second set of conditions that apply regarding how "what-if" recalculations are done by it. That is, this program does not hide and save formulas in cells; it requires that an equation be entered manually each time you wish to recalculate the data in the ESC. There are six reasons why ZX-CALC has this mode of "what-if" recalculation. First, it has to do with speed. It approximately takes 33 minutes to automatically recalculate the entire ESC. This is alright if there are numerous formulas scattered throughout the entire ESC, but in the case of just a few calculations it is preferable to use an equation that can generate actual results (e.g., sub-totals, totals, etc.,) within a matter of a few minutes instead of waiting a half-hour each time the ESC is recalculated. Second, there is usually (as in the case of another ESC known as VUCALC) a limit as to the number of formulas that can be included in an ESC. With ZX-CALC there are no limits to the number of

formulas that may be entered into the spreadsheet, since an equation is used to reenter the formula into a given cell each time the spreadsheet is manually instead of automatically recalculated. Third, ZX-CALC is an applications program and how it is applied presents a more flexible and dynamic style than a program that requires that cell addresses be included within a given cell and hidden and saved within same for further recalculation. That is, you can use and enjoy using it more so than if the "shoe was on the other foot." Fourth, though the program code to allow my ESC to operate in the first "what-if" mode of hiding and saving formulae was written it was a matter of priority in calculation features included within the program that determined its fate primarily as a manually recalculatable ESC. For example, ZX-CALC includes a SUM function that allows one or more columns/rows to be added together to obtain subtotals, cumulative totals and final totals. Also my ESC includes a "replication" feature that allows cell data to be loaded or calculated according to one or more entire column/row, simultaneously, depending up to what cell address is "absolutely" or "relatively" specified in a given equation to copy a given calculation or data. Both of these two features were esteemed to be more important to calculation and recalculation procedures than including the first "what-if" mode within the program. So the fact that ZX-CALC doesn't reference, hide and save formulae within a cell was a matter of trade-off between what comes first: versatility and speed versus simple "good looks." Fifth, there just wasn't enough room in RAM to add the first type of "what-if" mode into the program. But in short it wasn't necessary and it would have created (as I have already proven) certain disadvantages if it had been included. Finally, even though you are required to recalculate manually the spreadsheet there are no serious defaults in doing so, since the program is the one still responsible for handling the actual operational and mechanical control of a given equation whenever you attempt to recalculate the data in the spreadsheet. Therefore, the computer (not you) is what determines the final outcome of calculations performed with my ESC on a manual basis.

Don't miss a single issue of

TIMELINEZ

Make sure that you have paid your dues!

REMEMBER:

This is a two-month issue of:

TIMELINEZ

Deadline for the next issue:

MONDAY, DECEMBER 7,1987

FROM THE SEPT. 21-25 TWICE NEWSLETTER.

FROM THE 22 SEPT-5 OCT COMPUTER CURRENTS.

FROM THE JULY-AUGUST TORONTO SINC-LINK N/L.

Sinclair Vows Z-88 Will Be #1 In World

►Sir Clive Sinclair has announced his intent to make his recently introduced Z-88 laptop portable computer "the world's top seller within 18 months." Sinclair is the British entrepreneur who in 1986 sold an ailing computer and consumer electronics firm to England's Amstrad. Following that arrangement, Sinclair founded Cambridge Computers, which in March introduced the Z-88.

At the time, Sinclair said the under-two pound $300 laptop PC would be manufactured by Thorn EMI at a rate of 10,000 units per month.

Now, Sinclair has dismissed Thorn EMI and contracted with SCI, a U.S. firm that is known to be the world's largest electronics subcontractor. In addition, SCI has reportedly bought a partnership position in Sinclair's Cambridge Computers signalling, some say, its commitment to the Z-88.

How large a stake SCI holds in Sinclair's firm is not known—though Sinclair is known to have 55 percent ownership, Sinclair Research (his holding company) 8.5 percent and employees 20 percent.

The computer will be assembled at an SCI plant in Irvine, Scotland. SCI will reportedly add 50 new workers to the 650 already employed, shortly ramping production up 2,000 units per week. According to Sinclair, initial sales of the Z-88 will be limited to the U.K., though, he says, the American market can expect to see the portable PC some time next year. By the end of 1988, he says, he hopes sales to the U.S. and the Continent will together exceed sales in the U.K.□

BRITAIN'S AMSTRAD SEEKS TO EXPAND U.S. PRESENCE

Amstrad, the U.K. personal computer maker, has acquired Vidco, its Texas-based U.S. distributor, in a deal worth approximately $7.5 million. The move marks the firm's first acquisition in the U.S. and signals a push to increase its presence here.

According to company officials, U.S. sales make up approximately 8% of Amstrad's revenues, which should increase to about 30% by the end of June 1988. If so, the U.S. would become Amstrad's biggest market.

To acquire Vidco, Amstrad is paying $2 million in cash and issuing 2.2 million new shares, a small fraction of its new share capital. Officials said the firm bought Vidco because it wants complete control over its marketing and distribution in the U.S, and wants to facilitate an increase in inventory levels. Spokesmen also revealed that Amstrad plans to launch a major U.S. advertising campaign.

The firm expects to concentrate on three distribution channels in the U.S.: office equipment dealers for word processors and computer printers; retail outlets for home computers, including its PC1512 personal computer; and computer dealers for its PC1640.

Amstrad is also seeking to boost its activities in Europe, where France and Spain are its strongest markets. It owns subsidiaries in France and Italy, and expects to announce shortly the creation of another subsidiary.

— IDG News Service

HOW SLOW IS IT?

by Mel Richardson

It has been written many times that Sinclair floating point arithmetic is awfully slow. But it's accurate! is sometimes exclaimed in defence. Well, just how slow and accurate is it? In the March 87 issue of SKY & TELESCOPE, T.S. Kelso of Austen TX presents a Basic version of a program outlined in BYTE, Vol 10, No. 11, 1985 called the "SAVAGE BENCHMARK". A Sinclair version is presented below that should be usable on all our machines and provide some interesting comparisons.

The principle of the program is 2499 iterations of three pairs of complementary functions (tan/arctan, exponent/log, square root/square). The number "1" is sent through this grinder and incremented by 1 each time. The correct result of course is 2500 and the computed result will indicate accuracy while the time taken to compute can noted.

Results are given for some computers described as follows: A Z80A system using CPM 2.2 and single precision produced 2304.86 in 4M 20S. Compiled and with double precision gave 2499.999999869949 in 38M 22S and the same system with Turbo Pascal produced 2500.0046341 in 6M 41S. A system with an 8086 processor running at 8mhz using MS-DOS 2.11 produced 2500.004634 in 1M 59S, and with an 8087 numeric processor added gave 2500.00000000118 in 6 seconds. An IBM PC-AT running at 8mhz answered 2500.004634 in 54 seconds. My T/S 1000 in FAST mode with a Z80B produced respectable 2499.6758 in a modest 15m 29s. There you have it. Not too bad for an unenhanced basic.

For some perspective, it is reported in the same journal that the mighty CRAY X-MP/24 struggled for .7463S to answer 2499.999999999999 etc. Terrific.

```
  1 REM >SAVAGE BENCHMARK<
  5 CLEAR
 10 LET A=1
 20 FOR I=1 TO 2499
 30 LET A=TAN (ATN (EXP (LN (SQ
R (A*A))))))+1
 40 NEXT I
 50 PRINT A
```

NOTE: 2068 TOOK 17 MIN., 11 SEC. 2499.6758

! New GUTS/SV Meeting Time & Place!!!
Last Wednesday of the month.
'Star By The Sea' Catholic Church, 1385 Michigan Avenue (between Essex and Archer), Alviso. Take 237 to Taylor St. (First Street), North West on Taylor St. to Michigan, right on Michigan to the Church.
Thanks to Terry Greenlee for introducing us to the Church, and to Father Coleman for allowing us to meet there at no charge.

!! Upcoming Meetings:

!!! Nov. 25, Wednesday, 7:00 P.M., 'Star By The Sea' Catholic Church, Alviso.
Theme: A real TS Flight Simulator (FAA Approved)
Featured: Carl Rink

!!! Dec. 30, Wednesday, 7:00 P.M., 'Star By The Sea' Catholic Church, Alviso.
Theme: Timex Sinclair/Other Computer Interfacing
Featured: Mark Wahl, Terry Greenlee, Bob Orrfelt

!!! Jan. 27, 1988, Wednesday, 7:00 P.M., 'Star By The Sea' Catholic Church, Alviso.
Theme: QL Hardware Projects: RGB Cable, Centronics Interface, 300 BAUD MODEM adapter.
Featured: Bob Orrfelt?, Mark Wahl?, Bill Miller?, Rex Lundgren?.

!! Every Saturday morning, 9:00 A.M.; The Timex Sinclair Special Interest Group of The Computer Workshop meets at: Stanford University, Jordan Hall (in the Quadrangle), Math building (Number 380) in room 380C (downstairs).
For topic, check the LogOn BBS in Sunnyvale at: 408 735-7390, 300/1200, 8, N, 1, 24HRS, 32 lines (no waiting!). The LogOn/SV BBS now has downloadable TS files in directory 50. TS SIG OP: Andy Hradesky. Look for a TS Message Base soon.
The LogOn BBS in San Mateo at: 415-571-6911, 300/1200, 8, N, 1, 24HRS, 8 lines, TS SIG OP: Pat Morrissey, also has downloadable TS files in directory 50 and a TS Message Base in Message Base #10.

! New GUTS/SV BBS 408-248-8017, 300, 8, 1, N, 24 HRS, SYSOP Andy Hradesky.

! New Software Exchange Programs in Software Library, check Andy's BBS for a list. We hope to have a list of all Public Domain or 'ShareWare' progams in the library with descriptions in the newsletter next month. Meanwhile, check Andy's BBS. If you live too far away to call the BBS or if you don't have a MODEM or if you can't attend a meeting, we will mail you the programs if you will:
! Mail us the Media:

!! Cassette	TS1000, TS2068 or Spectrum
!! A&J Wafer I	TS1000 or TS2068
!! A&J Wafer II	TS2068 or WafaDrive
!! 3 in Disk	Zebra System
!! ZX Microdrive Cartridge	Spectrum or QL

!! Check with us about other Media, it may be possible we can get help from other club members;
! Send us a 'Copying Fee' for each program ordered to help pay for the costs of this service. $2 for each Cassette Program (They take a long time). $1 for each program on the other Media (They don't take so long). The Fee will be waived if you send us an exchange program. Sending us some sort of an exchange file will also help us to check that our drives are compatible with yours.
For the latest list of ShareWare Software or to place an order, contact: Address:

! GUTS/SV TS ShareWare Software Exchange;
Andy Hradesky; 408-248-8017;
GUTS/SV Software Exchange Chairman;
1256 Henderson Ave., Apt. #4;
Sunnyvale; CA; 94086; USA.

You may also download the best of the TS ShareWare library directly from the LogOn BBS's in Sunnyvale or San Mateo.

! New GUTS/SV Workshop meetings. GUTS/SV is starting a workshop meeting program on Wednesday nights when the regular meeting at 'Star by the Sea' Catholic Church in Alviso is not scheduled. These meetings will be held at members houses for people interested in special projects the member holding the meeting is working on. Check Andy's BBS for the schedule.
First meetings will be:
!! Terry Greenlee ... TS Displays
!! Carl Rink ..... A real TS Flight Simulator

! New newsletter subscription rates. $15 per year for everyone, to help pay for the new Software library projects which are now available to all subscribers.

! GUTS/SV news 8711:

!! 871028 meeting at Alviso 'Star by the Sea' Catholic Church.
Meeting Attendees: Oliver Chaplin, Mark & Natalie Wahl, Terry Greenlee, Andy Hradesky, Bill Miller, Jim Wheeler, Mike Stewart, Bob Orrfelt, John Ezike from TS EBZUG, Carl Rink, Michael Furman and his dad, Jeff.
!!! Oliver Chaplin hasn't located the TS2000 at the flea Market yet.
!!! Mark Wahl demonstrated his new QL 'boot' and 'copy' programs. These programs are under developement and will eventually provide the capability to:
!!!! List the files on all devices upon power up, reset or command.
!!!! Load any file from any device by moving an indicator to it and pressing a key.
!!!! Copy (Move) any file or files from any device to any device by moving an indicator to the file to be moved and pressing a key to mark it to be moved.
!!!! Change any device to the default device.
!!!! Print the directory(s) of any device in a size and format to be stored easily with the media.
!!!! Print a description of each file from within the file by searching for a file description indicator and printing a specified number of characters which follow it. Also print Info about the file such as which sectors it occupies.
!!! Andy Hradesky discussed reviving the Silicon Valley Timex Sinclair Computer Fest on a little smaller scale. A one day event oriented mostly toward TS Users West of the Rocky Mountains was considered. The exact location and date are yet to be chosen but the previous date in June seems reasonable.
!!! Bill Miller demonstrated Jack Dohany's developement QL with the 'Schon' keyboard, which he graciously loaned to SLIX.
!!! Terry Greenlee demonstrated sending text files from a ZX Spectrum/ Wafadrive RS-232 port to his IBM PC compatible Toshiba T1100+.
!!! Jim Wheeler isn't quite ready to demo his 72K CMOS RAM expansion for his TS1000.
!!! Bob Orrfelt reports he hasn't yet got his Amdek 'Amdisk III' dual disk units to work with Jack Dohany's 'Disciple' Disk Interface, but he will keep trying.
!!! Mike Stewart has his new QL, but hasn't had a chance to do much with it yet.
!!! John Ezike says TS EBZUG is still looking for a meeting place. Maybe they could meet with TS PUG till they find a place?
!!! Carl Rink reports that his new Toshiba 3.5in disk drives seem to work fine with Jack Dohany's QL 'Cumana' Disk Interface.
!!! Michael Furman demonstrated his new Alphacom printer with his TS1000.

!! Thanks to renewing subscribers Walter Ranzau, Bob Kuster, and Kenneth Campbell.

! GUTS/SV news 8710:

!! 870930 meeting at Alviso 'Star by the Sea' Catholic Church.
Meeting Attendees: Oliver Chaplin, Mark & Natalie Wahl, Terry Greenlee, Andy Hradesky, Bill Miller, Jim Wheeler, John Sims, Mike Stewart, Bob Orrfelt and Jim Howell (The 'J' of 'A&J Microdrive').
!!! Oliver Chaplin tried to get color on his new Amdek 300 composite color monitor. He didn't have much luck. Can anybody help?
!!! Mark Wahl contributed his two 64 character column print program for Spectral Writer to the SLIX library.
!!! Andy Hradesky is the new editor of TIMELINEZ. Thanks to Norm Lehfeldt for doing such a good job and good luck to Andy in his new job.
!!! Bill Miller demonstrated Mark Wahl's new program 'P1', which prints the first sector of each Wafadrive file to the TS2040 printer, the Wafadrive Centronics Port, or a Wafadrive DATA file to easily find out what each program on the Wafer is (in case you can't figure it out from the File Name). It also prints the sectors in Last In First Out (LIFO) order so that the newest files are printed out first. Thanks to Mark for putting this program in the GUTS/SV Library. Maybe he will do a program like this for the other TS Mass Storage Devices?
!!! Terry Greenlee reports he is investigating software that will allow IGS and DIF Computer Aided Design files to be manipulated and plotted by Sinclair computers.
!!! Jim Wheeler reports he is working on a 72K CMOS RAM expansion for his TS1000.
!!! John Sims is trying to get the BASIC program 'ELIZA' to run on his TS2068. He got the listing from the Naval Postgraduate School in Monterey.
!!! Bob Orrfelt is designing yet another TS disk interface to drive his Amdek 'Amdisk III' dual disk units (with power supply) which he bought for $25 each.
!!! Welcome to GUTS/SV meeting attendee Mike Stewart. Mike will be helping Andy with TIMELINEZ.
!!! Jim Howell reports that he suspects he has parts for about 20 more TS2068 Microdrives. He says he will need an order for about 5 TS1000 microdrives to resume production on them.

!! Welcome to new Subscriber Jim Levey of Streetsboro, OH. Thanks to renewing subscribers Don Elliot, Carl Rink, Mark Wahl, Ron Hruby and John Sims.

A mathamatical experiment inspired Mark Wahl to write this short QL program. Basically, it will plot any number of points (stars) of your choice. You will then observe sort of a "gravitational attraction" interacting between the points. Properly, Mark titled his program CLUSTER.

```
50 PAPER 0
100 CLS
105 CLS #0
110 INPUT #0;" Number of stars?
    ",nos
120 DIM ax(nos): DIM ay(nos):
    DIM az(nos)
130 DIM vx(nos): DIM vy(nos):
    DIM vz(nos)
140 DIM x(nos): DIM y(nos):
    DIM z(nos)
150 FOR i=1 TO nos: LET vx(i)=
    RND(3)/10: LET vy(i)=RND(3)
    /10: LET vz(i)=RND(9)/10:
    NEXT i
160 FOR i=1 TO nos: LET x(i)=
    RND(150): LET y(i)=RND(50):
    LET z(i)=RND(70): NEXT i
170 FOR i=1 TO nos
180 LET ax(i)=0: LET ay(i)=0:
    LET az(i)=0
190 FOR i=1 TO nos
200 IF i=j THEN GO TO 360
210 LET d1=(x(j)-x(i))
220 LET d=d1^2
230 LET d2=(y(j)-y(i))
240 LET d=d+(d2^2)
250 LET d3=(z(j)-z(i))
260 LET d=d+(d3^2)
270 IF d=0 then beep 1000,1
280 LET f=d/10000
290 AT #0;0,0: PRINT #0;f*100;
    "          "
300 LET ax(i)=ax(i)+(f*d1/d)
320 LET ay(i)=ay(i)+(f*d2/d)
340 LET az(i)=az(i)+(f*d3/d)
360 NEXT j
370 NEXT i
380 FOR i=1 TO nos
390 LET vx(i)=vx(i)+ax(i)
400 LET vy(i)=vy(i)+ay(i)
410 LET vz(i)=vz(i)+az(i)
420 NEXT i
430 FOR i=1 TO nos
440 LET x(i)=x(i)+vx(i)
450 LET y(i)+y(i)+vy(i)
460 LET z(i)=z(i)+vz(i)
470 POINT x(i)/2,y(i)/2
480 NEXT i
490 GO TO 170
```

P U G N E W S

by Walt Gaby

THE OCTOBER 18 MEETING, WHICH WAS VIDEO-TAPED(!), WAS WELL-ATTENDED. THERE WERE MANY ITEMS OF INTEREST DISCUSSED.

JACK DOHANY REPORTED ON SEVERAL MATTERS. HE HAS JUST ABOUT COMPLETED A MUCH-ENHANCED M/SCRIPT, VERSION 6. (SEE SEP/OCT ISSUE OF TIME DESIGNS MAGAZINE, PAGE 18, FOR A COMPLETE REPORT ON IT.)

JACK ALSO INDICATED THAT HE WOULD RECOMMEND THE LARKEN DISK SYSTEM INTERFACE FOR THE 2068 AS THE BEST CHOICE. PAT MORRISSEY POINTED OUT THAT THE BEST DRIVES ARE THOSE MADE BY MITSUBISHI (3.5 INCH). FINALLY, HALTED ELECTRONICS IS A GOOD PLACE TO ACQUIRE CASES FOR THE DRIVES.

REX LUNDGREN GAVE A BRIEF REPORT ON HIS CURRENT PROJECT, A BOARD WHICH SERVES AS A CENTRONICS/PARALLEL-TO-SERIAL INTERFACE.

RITA TOTH SUGGESTED THAT, AS WE HAD BEEN DOING IN THE CASE OF THE NEVADA PRISONER PROGRAM, WE NOW BEGIN TO HELP THE JUVENILE DIVISION IN SAN FRANCISCO.

WALT GABY (that's me) REPORTED ON HIS PLEASURE WITH HIS LATEST HARDWARE ACQUISITION...THE PANASONIC P1091i PRINTER.

AS THIS PARAGRAPH INDICATES, ONE OF THE MANY THINGS THE PANASONIC PRINTER CAN DO WITH EASE IS PRINT MANY CHARACTERS ON A LINE AND MANY LINES ON A STANDARD PAGE. FOR EXAMPLE, I DO MANY DOCUMENTS WITH 120 CHARACTERS PER LINE AND 140 LINES PER PAGE.

ALL READERS WILL NOTE THAT WE HAVE A NEW NEWSLETTER EDITOR. AS NORM LEHFELDT INDICATED IN THE LAST ISSUE, BOTH WORK AND PERSONAL OBLIGATIONS LEFT HIM WITH LITTLE OR NO TIME FOR THE TASK OF EDITING. WE SHOULD ALL THANK NORM FOR THE WONDERFUL WORK THAT HE DID...PARTICULARLY BRINGING THE WORLD OF DESKTOP PUBLISHING TO TIMELINEZ!

WE ARE MOST FORTUNATE TO HAVE ANDY HRADESKY AS OUR NEW EDITOR! HE IS AN ENERGETIC YOUNG MAN WHO WILL BRING REFRESHING IDEAS TO THE PUBLICATION.

Support Your Local Timex/Sinclair Users Group!

The following is an up-to-date list of our club's library. Remember, this is all public domain and can be used by all. If you own or are in possession of a modem, you can contact the Logon BBS, (Sunnyvale or San Mateo - see SincLink for #s), and down/load any of the library's programs. The Timex section is L 50. Enjoy...

TIMEX/sinclair 1000-1500 >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

1. LINE RENUMBER
2. SHUFFLED CARDS
3. MEMORY WINDOW
4. LOW PASS FILTER
5. BIORYTHM
6. DRAW_IT
7. STOCK SCREEN
8. DIGITAL CLOCK
9. SLALOM COURSE
10. MUTIPLICATION
11. BLACKJACK
12. CHECKBOOK
13. LOAN SCHEDULE
14. TIMES SQUARE
15. BRICKBUSTER
16. MOONLANDER
17. FACECLOCK
18. MUSIC KEYBOARD
19. PINBALL
20. ANTI-INVOLUTE COMPUTATION
21. PITCH DIAMETER MEASUREMENTS
22. LABELS AND INVOICES
23. ZTEXT
24. SLOT
25. TAPE LABELER
26. SCREEN-CODE 2.0 (FREEWARE)
27. SCOREPAD
28. DISA-1000 DISASSEMBLER
29. ADDRESS BOOK
30. AUTOMOBILE ANALYZER
31. LINEAR SEARCH
32. Xmas LABELS
33. CRIBBAGE

TIMEX/sinclair 2068 >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

1. FULL MONITOR / MINI DISASSEMBER
2. GOLF 2068
3. 3-D DRIVER / FREEWAY
4. 3-D NOUGHS & CROSSES
5. TELEPHONE BOOK
6. GLOW-WORM
7. STATISTICS by TURNBULL
8. TRACER
9. QUICKLOAD / TOOLKIT

10. LAS VEGAS / 3-D GRAPH
11. CALCULATOR
12. FIRST LOADER
13. TYPEWRITER
14. TYPEWRITER 64
15. KEYWORD 2068
16. GAMES PAC 1
17. EXTENDED BASIC
18. HEADERS
19. BIO-RYTHMS
20. USR CHARACTERS
21. THICK CHARACTERS
22. COMPACTOR
23. GRID / WORD PUZZLE
24. COLOR ORGAN / TINYBOARD
25. SPANTUTOR
26. RLE GRAPHICS DECODER
27. 720K RLE FILES 5 1/4"
28. MTERM UTILITIES
29. DIRECTORY / TELEPHONE BOOK
30. 3-D WORDS / Xmas MUSIC
31. TAPE LABELER

There you have it. Many of these programs are distributed as "Fairware" or "Shareware" packages. If the program you want is one, please support the original programmer so that we may continue to expand our software needs. Give credit where credit is due! We wouldn't be here otherwise.

POTENTIAL NEW MEMBERS.....

PLEASE COMPLETE THE INTEREST CARD BELOW AND SEND YOUR $15.00 MEMBERSHIP FEE TO THIS ADDRESS.

__ EBZUG, PUG, GUTS/SV __
6675 CLIFFORD DRIVE
CUPERTINO, CA 95014

Membership includes free access to the libraries of all groups and the program library. A subscription to " TIMELINEZ " for one year will keep you informed.

Club -- meetings are always open to the public at no charge. If you wish to attend before joining, you may certainly do so.

HAPPY COMPUTING!....THE EDITORS

TIMELINEZ Interest Card

Name_____

Address:_____

City_____State__Zip____

Phone Number:_____

How did you hear of us? Radio___

TV__ Newspaper__ Store__Friend__

Work with computer on your job?

Yes__No__ Make/Model_____

Do you own a computer? Yes__No__

Make/Model (yours)_____

Is it your first? Yes__ No__

Computer experience: Mo.__Yrs.__

Are you interested in lessons in

Basic__or Advanced__Programming?

List Main Interests/Activities

Basic Programming__ Graphics__

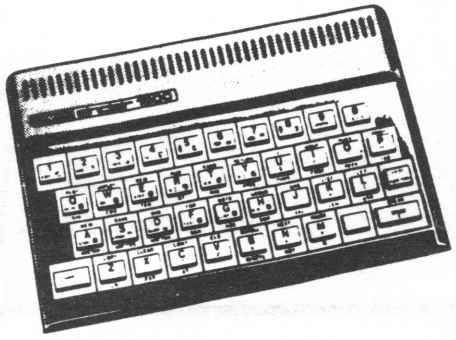
Entertainment/Games__Education__

Business Application__ Finance__

Knowledge: Software__ Hardware__

Home Records__ Other_____

Please send more info. Yes__No__



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BERKELEY, CALIFORNIA 94703
(Woody McPheeter's)

CONTACT: ROSS ENGLISH (415) 465-3116

MEETINGS: FOURTH THURSDAY OF EACH MONTH, 7:30 P.M.
CALL ROSS ENGLISH FOR DETAILS ON MEETING PLACE.

MAKE CHECKS FOR DUES PAYABLE TO "WOODY McPHEETERS".

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THIS TIMELINEZ NEWSLETTER IS A JOINT PUBLICATION OF THE THREE TIMEX-SINCLAIR USER GROUPS IN THE S.F. BAY AREA.

NEW MEMBERS AND VISITORS ARE ALWAYS WELCOME!

FOR FULL MEMBERSHIP (INCLUDING PARTICIPATION IN GROUP MEETINGS, THE NEWSLETTER, PROGRAM LIBRARY PRIVILEGES AND SPECIAL EVENTS) SEND $15 ANNUAL DUES TO ONE OF THE ABOVE ADDRESSES WITH THE CHECK PAYABLE AS INDICATED.

READERS OUTSIDE THE SAN FRANCISCO BAY AREA MAY SUBSCRIBE TO THE NEWSLETTER ONLY BY SENDING A CHECK FOR $10 TO ONE OF THE ABOVE GROUPS.

Whew! Finally finished. What a job. I quess I forgot to say earlier that I was compiling this TIMEX/sinclair oriented magazine to honor others before me by actually doing everything by hand so to speak. The only computer I used is my QL and Quill for the text. Everything else was strickly cut and paste. Yes, the typewriter was out too. Hopefully I won't have to repeat this for the December issue, (hear that Norm?). Anyway, the Desk Top Publishing program should be at my door any day now.

Many of you aready know that Sunset Electronics is no longer selling Sinclair QL products. The Frisco bay area isn't lost yet. Thru Johns help, my wife and I have started a small company titled the QL CONNECTION, where we will be giving full support to the 68000 based machine in both hardware and software. Send for our catalog to:

QL CONNECTION
1256 Henderson Ave. #4
Sunnyvale, CA 94086

Latest news from A+ Response is that the QL manuals are back from the printers. However, they are not what you would expect if yours is on backorder for missing sections. It is true you get a complete verson, but the new manuals are now printed with four pages compressed into one 81/2 X 11 sheet of paper. It seems that A+ isn't producing the quality/care type aditude that is need for this type of hobby.

A GLOSSARY OF COMPUTER TERMS

ACCESS - A large painful boil on the chips from distant hacking.
ANSI - A hacker who can't sit still
ARRAY - Spontaneous exclaimation by the hacker when something works for a change.
RARELY USED ASCII - The key to your girlfriend's apartment.
BACKWARD RECOVERY - Reagonomics.
BASIC - Something so simple you need a computer to understand it.
BAUD RATE - Fee charge by loose women, usually $500 and up.
BI-DIRECTIONAL - A computer who swings both ways.
BUFFER - A nude hacker.
BYTE - Short for "BUY IT", usually in reference to peripherals.
CURSOR - A hacker on his way home from the computer store.
DEDICATED WORD PROCESSOR - A secretary who stays after 5.
DISK DRIVE - A popular street in Cupertino.

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